

CLAIMS

What is claimed is:

1. A method for testing a conference server for use in a telephone network, said conference server having a plurality  
5 full duplex channels each channel including an input to the conference server and an output from the server, said method comprising the steps of:

in a first generating step, generating a plurality of test tone signals, wherein each of said test tone signals  
10 comprises at least one unique audio frequency signal;

applying a different one of said plurality of test tone signals to each one of said plurality of conference server inputs;

selectively combining at least some of said test tone  
15 signals within said conference server to generate a plurality of test output signals corresponding in number to said conference server inputs and coupling said test output signals to selected ones of said conference server outputs; and

analyzing said conference server outputs to identify  
20 which of said plurality of test tone signals are present within said conference server outputs; and

providing an error indication in the event said test tone signals detected within each of said conference server outputs do not correspond to expected test tone signals.

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2. The method of claim 1 wherein at each of said test tone signals comprises at least two unique audio frequency signals.

3. The method of claim 1 wherein said audio frequency signals comprise audio frequency signals that are not employed within said telephone network for alphanumeric character signaling.

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4. The method of claim 1 wherein said applying step includes the step of applying a different one of said plurality of test tone signals to each one of said plurality of conference server inputs under the control of a first processor.

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5. The method of claim 4 wherein said analyzing step is performed under the control of a second processor.

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6. The method of claim 3 wherein said first and second processors comprise the same processor.

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7. The method of claim 1 wherein said first generating step includes the step of generating n test tone signals, said analyzing step comprises the step of analyzing said conference server outputs to identify which of said n test tone signals are present within said outputs, and said second generating step comprises the step of generating a tone analyzer output signal that indicates if selected ones of said n test tone signals are absent from each of said conference server outputs.

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8. The method of claim 7 wherein said analyzing step includes the step of utilizing a controller that is operative to execute a Goertzel algorithm to identify which of said n

test tone signals are present within said conference server outputs.

9. The method of claim 1 wherein said first generating step includes the step of generating n test tone signals and said method further includes the step of transmitting a control signal to said conference server to mute one of said n test tone signals; in a second generating step, generating an output that is indicative of the presence of said one of said n test tone signals within at least one of said conference server outputs.

10. The method of claim 9 wherein said analyzing step includes the step of utilizing a controller that is operative to execute a Goertzel algorithm to identify which of said n test tone signals are present within said test output signal.

11. The method of claim 1 wherein said method includes the step of recording said conference server outputs; and said analyzing step comprises the step of analyzing said recorded conference server outputs.

12. The method of claim 1 wherein said first generating step comprises the step of generating a plurality of test tone signals having at least first and second test tone signal portions, wherein each of said first and second test tone signal portions comprises the sum of at least two distinct audio frequency signals and wherein said first test tone signal portion is not the same as said second test tone signal portion.

13. The method of claim 12 wherein said first and second test tone signal portions repeat on a generally periodic basis.

14. The method of claim 1 wherein each of said audio frequency signals are separated from all other audio frequency signals employed to generate said test tone signals by at least one-hundred hertz.

15. The method of claim 1 further including the steps of:  
10 providing gain control commands to said conference server to vary the gain of said conference server with respect to at least one of said test tone signals;

wherein said analyzing step includes the step of analyzing the gain of said at least one test tone signal  
15 within said conference server output signals to determine whether the amplitude of said at least one test tone signal varies in accordance with said gain control commands; and

in a second generating step, generating an indication of the variation of the gain for said at least one test tone  
20 signal in response to said gain control commands.